2Q FY00 SIP MILESTONE FULL STATUS REPORT Strategic Implementation Plan (SIP) Milestone Information (Review Columns G to I, complete F if appropri								As of 6/19/00	EVAL COST SCHEDULE TECHNICAL Blue EACunder > 5% Ahead > 6 weeks Met w/hess effort Green EAC w/d 5% Within 6 weeks Meets Yellow EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Probs Solvable, Action Plan Red EAC over 5-15% Behind 6-12 weeks Plan					
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								DI UE		V=11.0W	252			
0A1.0		2000	GRC Objective A1: Reduce aircraft accidents related to icing, weather, poor visibility, and engine problems; develop technology to prevent and suppress aircraft fires.			C. RUSSO	2000	BLUE	GREEN	YELLOW	RED			
2000A1.2		2000	Complete a report detailing the datalink and communications requirements of current and future weather products and tools.	1Q00	1Q00	K. Martzaklis	6150	AvSP/WxP	GREEN	GREEN	GREEN	Completed. 6100/5600 Paul McMasters		
2000A1.3		2000	Develop candidate next-generation communication system architectures addressing the timely and accurate dissemination of high-quality graphical weather information		2Q00	K. Martzaklis	6150	AvSP/WxP	GREEN	BLUE	GREEN	Completed. 'Complete early in 2Q00 6100/5600 Paul McMasters		
0A4.0		2000	GRC Objective A4: Develop and demonstrate enhanced aviation system throughput by propulsion system enhancements for rotorcraft and an improved airspace communications infrastructure to support free flight.			C. RUSSO	2000							
2000A4.1		2000	Complete development of a Ku-Band Aeronautical Communications Terminal	1Q00	4Q99	K. Martzaklis	6150	ASC/AATT	GREEN	BLUE	GREEN	Completed 6100/5600 Paul McMasters		
0A9.0		2000	GRC Objective A9: Reduce the cost contribution of access- to-space propulsion systems and associated subsystems while improving their performance, life, function and operability.			G. BARNA / F. BERKOPEC P. McCallum	6000/							
2000A9.1		2000	Develop and demonstrate X-33-scale advanced propellant densification technology. Complete LOX densifier verification testing and assemblyof a hydrogen densifier.	2Q00	Late 3Q00	D. Vento / T. Tomsik	6500	RLV Focused	YELLOW	YELLOW	YELLOW	LOX Densifier Testing will take place in the 3rd quarter of 00. Hydrogen Densifier Assembly will be completed 3rd quarter of 00. 6000 M. Lester		
2000A9.2		2000	Develop and demonstrate application of the health management Post Test Diagnostic System for Reusable Launch Vehicles and the X-33.	3Q00	1Q00	J. Zakrajsek /C. Meyer	6500	X-33	GREEN	BLUE	GREEN	Completed 6500 Scott Graham		
2000A9.3		2000	Develop and demonstrate advanced structural concepts and materials for reusable propulsion system components such as gas generation combustors, and thrust cell liners.	4Q00		_J. Borsody	6500	RLV Focused	GREEN	GREEN	GREEN	6000 M. Lester		
2000A9.4		2000	Complete a high voltage modular switch breadboard and select most promising candidates for further development.	4Q00		J. Soeder	5450	Launch Technology Bantam	GREEN	GREEN	GREEN	On schedule to make downselect at end of 4th quarter FY 2000. 5000 S. Foust		
0A10.0		2000	GRC Objective A10: Develop advanced spacecraft propulsion technology.			G. BARNA	6000							

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2000A10.1	2000	Complete 500-hour test of a 10500 kilowatt Hall Electric Thruster in support of the Advanced Space Transport Program	4Q00		John Sankovic <mark>Harry Cikanek</mark>	6500	ASTP In-Space	GREEN	GREEN	GREEN	100 Hours of operation as of 5/2/00. 6000 M. Lester	
2000A10.2	2000	In partnership with Russia, flight-demonstrate Hall Effect thruster technology on EXPRESS.	4Q00	Missed Launch Late	John Dunning Harry Cikanek	6500	Pathfinder	RED	RED	RED	Flight Hardware will not meet scheduled June launch date. Work is continuing in the event the launch date slips. 6000 M. Lester	
OngoA10.A	On- going	nvestigate breakthrough propulsion physics.	On- going		M. Millis	5870 5880	Space Transportation Research	GREEN	GREEN	GREEN	All NRA selections on contract, research now underway. 5870 Marc G. Millis	
0A11.0 0R13	2000	GRC Objective A11: Complete 90 percent of all AT Enterprise-controlled milestones within 3 months of their scheduled completion.			P. McCALLUM/ C. RUSSO/ G. BARNA	0140/ 2000/ 6000						
OngoA11.A 0R13		Complete 90% of all Enterprise controlled milestones within 3 months g of schedule.	4Q00		P. McCALLUM/ C. RUSSO/ G. BARNA	0140/ 2000/ 6000	N/A	N/A	88%	N/A	Code R goal is 90% within 3 months (I.e. Yellow or better)	
0H1.0	2000	GRC Objective H1.0: Develop power, communications, and inspace propulsion systems and advance the state of knowledge of reduced-gravity effects to enable human missions of exploration. (Was supporting FY99 HEDS Goal 2, now FY2000 HEDS Goal 1)			G. BARNA	6000						
2000H1.1	2000	Deliver the Mars Array Technology Experiment (MATE) and Dust Accumulation and Removal Experiment (DART) flight experiments for the Mars 2001 mission	2Q00	Late 4Q00	D. Flood	5410	CETDP Power Tech/ Mars 2001	YELLOW	YELLOW	GREEN	MATE/DART flight hardware delivery will not meet the original project schedule, however JSC's overall schedule has been slipped for other reasons. Funding received does not cover the GRC workforce costs. 6000 M. Lester	
2000H1.2	2000	Develop an advanced power converter using digital control and demonstrate output impedence tailoring (Same as 2000E1.1)	3Q00	2Q00	J. Soeder	5450	CETDP Power Tech.	GREEN	GREEN	GREEN	Completed. Milestone completed late in 2Q of FY 2000. 5000 S. Foust	
2000Н1.3	2000	Receive the phased-array antenna flight unit from Raytheon for the Direct Data Distribution (DDD) experiment and commence test and integration.	3Q00	Late 2Q01	J. Budinger/ L. Wald	6100/ 6150	Space Operations Program/ Communications Technology Activities Project	GREEN	YELLOW	GREEN	Contract delivery is expected to be delayed by 6 months due internal contractor technical issues (See SIP 2000S1.2). Item is not on Critical Path and Project Schedule minimally impacted. 6100 P. McMasters	

2Q FY00 SIP MILESTONE FULL STATUS REPORT Strategic Implementation Plan (SIP) Milestone Information (Review Columns G to I, complete F if approprise									EVAL COST SCHEDULE TECHNICAL Blue EACunder > 5% Ahead > 6 weeks Met w/less effort Green EAC w/1 5% Within 6 weeks Meets Vellow EAC over 5 - 15% Behind 6 - 12 weeks Prob. s Solvable, Action Plan Red EAC over > 15% Behind 3 - 12 wk, Crit Path Not Meet, No Action Plan				
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2000H1.4		2000	Develop a miniature internet router breadboard for 2-4 megabit per second mobile applications.	4Q00		J. Budinger/ P. Paulsen	6100/ 6150	Space Operations Program/ Communications Technology Activities Project	GREEN	GREEN	GREEN	6100 P. McMasters	
2000H1.5		2000	Support World Radiocommunications Conference 2000, including all preparatory meetings.	3Q00		W. Whyte	6140	Spectrum Management	GREEN	GREEN	GREEN	6100 P. McMasters	
2000H1.6		2000	Support Inter-American Telecomm Commission Radiocommunications Committee	1Q00	1Q00	W. Whyte	6140	Spectrum Management	GREEN	GREEN	GREEN	Complete 6100 Paul McMasters	
OngoH1.A		On- going	Develop methods, data bases, and validating tests for material flammability characterization.	On- going		D. Urban	6711	Combustion Science Research Projects	GREEN	GREEN	GREEN	6000 M. Lester	
OngoH1.B			Advance the state of reduced-gravity fluid physics knowledge to allow the development of reliable and efficient heat transfer technology for space and extraterrestrial operations.	On- going		B. Signh/ J. Gaby	6712/ 5870	Fluid Physics Research Projects	GREEN	GREEN	GREEN	Workshop planned for July 25-26, 2000 in Cleveland to identify research issues Defining space flight experiments CVB and PoolBoiling for ISS. New Pls selected from 98-NRA. 6000 M. Lester The proposals have been evaluated an rated and are awaiting funding. 5000 S Foust	
OngoH1.C			Advance the state of reduced-gravity fluid physics knowledge to allow development of effective <i>fluids</i> teel management technology for space, extraterrestrial, and industrial operations.	On- going		B. Signh/ J. Gaby	6712/ 5870	Fluid Physics Research Projects	GREEN	GREEN	GREEN	Initiating plans for workshop in Sept 2000 in Cleveland. Made progress in defining flight experiment on moving contact line. 6000 M. Lester The proposals have been evaluated an rated and are awaiting funding. 5000 S Foust	
OngoH1.D			Advance the state of reduced-gravity fluid physics knowledge to enable dust control technologies and bulk materials handling for extraterrestrial habitats and/er in situ resource utilization.	On- going		B. Signh	6712	Fluid Physics Research Projects	GREEN	GREEN	GREEN	Science Concept Review (SCR) for two flight experiment (Electrostatics of Granular Media and Gas-Particle interaction in microgravity) scheduled to be completed in June 2000. 6000 M. Lester	
OngoH1.E		On- going	Develop and demonstrate advanced power generation, storage and distribution technologies that will impact ISS, Space Shuttle, and Space Exploration activities.	On- going		R. Burns/J. Dunning	6900	TBD	GREEN	GREEN	GREEN	Recent activities are a station request to develop an alternate DDCU and the ongoing flywheel project. 6000 M. Lester	
)H2.0		2000	GRC Objective H2: For the combustion science and fluid physics disciplines, enable the research community to use gravity as an experimental variable. (Was supporting FY99 HEDS Goal 1, now FY2000 HEDS Goal 2)			G. BARNA	6000						

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) Milestone Information (Review Columns G to I, complete F if appropri	iate)				As of 6/19/00	Green					
GRC SIP	NASA	(,	Planned	ı			Program/Project/	SIP WILL	ESTUNE EV	TECHNICAL	ACTION: Complete Columns J to M 1
ID No.	MS	FY	GRC Objectives (In Bold Italic) / Milestones	Date	Actual Date	Owner	Org.	Process	COST	SCHEDULE	PERFORM.	DESCRIPTION OF PROBLEM AND ACTION
2000H2.1		2000	Complete development, testing and delivery of the Combustion Module 2 (CM-2), along with one commercial and two scientific experiments, and prepare it for operation on STS-107.	4Q00 2Q00	Launch Delay 4Q00	A. Otero S. Simons	6729 6700	Microgravity Reserch Program	GREEN	RED	GREEN	STS-107 mission has been delayed to April of 2001. New CM-2 delivery date is August 2000. Project is on schedule to meet this date. 6000 M. Lester/A. Otero Schedule will be GREEN with PMC approval of date change.
2000H2.2		2000	Complete one Spread-Across-Liquid (SAL) and one-Extensional Rheleogy Experiment (ERE) sounding rocket flight.	2Q00	Late 1Q01	S. Simons	6700	Microgravity Reserch Program	GREEN	YELLOW	GREEN	ERE will meet its milestone. SAL will be delayed to the first quarter of FY'01 to implement the results of theSAL-5 FRB and MRPO rocket funding constraints. 6000 M. Lester
2000H2.3	0H1	2000	Support an expanded microgravity research program of 200 investigations in the combustion science and fluid physics disciplines.	4Q00		S. Simons	6700	Microgravity Reserch Program	GREEN	GREEN	GREEN	6000 M. Lester
OngoH2.A			Enable increased combustion system efficiency, reduced pollution, and mitigation of fire risks through insights gained and data uniquely obtained from micro-gravity experiments.	On- going		D. Urban	6711	Combustion Science Research Projects	GREEN	GREEN	GREEN	6000 M. Lester
OngoH2.B			Conduct ground-breaking basic research in reduced-gravity fluid physics and transport phenomena to provide a fundamental understanding of natural phenomena affected by gravity, thereby increasing the efficiency and effectiveness of space-based and industrial processes by providing support to 54 principal investigators.	On- going		B. Singh	6712	Fluid Physics Research Project	GREEN	GREEN	GREEN	59 Principal Investigators currently supported to conduct flight and ground-based research through peer-review process.
0H3.0		2000	GRC Objective H3: Support the design, development, deployment and operation of the ISS and demonstrate technologies for nontoxic Space Shuttle upgrades that require less maintenance and hazardous ground processing than current hypergolic propulsion systems. (Was supporting FY99 HEDS Goals 3 and 4, now FY2000 HEDS Goal 3)			G. BARNA	6000					
2000НЗ.1			Deliver more reliable efficient dc-to-dc converters and more efficient and flexible remote power switches for the ISS and continue the development of advance power system components to reduce ISS electric power system requirements.	4Q02 1Q00		J. Soeder	5450	M/ISS	N/A	N/A	N/A	There is NO MONEY to meet this milestone. There has never been any money to meet this milestone. Consequently, nobody is working on this milestone. 5450 J. Soeder Activity not yet started. This milestone is really due 4Q FY02, and should not have been included in the FY00 SIP. 6900 J. Dunning
2000Н3.2		2000	Design, develop, build, and deliver a safety-critical manual switch for the ISS power system.	1Q00	3Q99	J. Mullins	6900	M/ISS	GREEN	BLUE	GREEN	Completed. 6900 J. Dunning

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	Need	SIP	Milestone Change Form to officially remove the milesto	ne from	the FY0	00 SIP and i	move it t	o FY01.				Manifest Correction: PCS is on mission 6A, not UF-1. 6A is currently scheduled
2000НЗ.З			Provide for deployment on <i>6A</i> UF-1, the Physics of Colloids in Space (PCS) experiment, integrate it in the ISS EXPRESS rack, and initiate experiment operations following system checkout.	3Q01 4Q00	Launch Correcti on 3Q01	N. Shaw	6728	Fluid Physics Research Projects	GREEN	GREEN	YELLOW	for NET (No earlier than) April 19,2001. Technical Performance is "yellow" due to Bragg image failure after vibe & accidential damage to Bragg scren; assessment & resolution underway. 6700 N. Shaw
2000НЗ.4			Complete the delivery of all Space Acceleration Measurement System (SAMS-II) equipment needed to support 6A UF-4.	4Q00		D. Francisco	6727	Acceleration Measurement Research Projects	GREEN	GREEN	GREEN	Manifest Correction: Hardware development is on track to meet delivery dates for a 6A launch. Proposed title change. 6000 M. Lester/D. Francisco
2000Н3.5			Complete safety and abuse testing of Lithium-lon cells for an electric auxiliary power unit for the Space Shuttle.	4Q01 4Q00	Program Change 4Q01	R. Burns P. Dalton	6900	Shuttle Upgrade/ CETDP Power Tech.	N/A	N/A	N/A	We have received (in FY99 and FY00) sub allotted funds from JSC to support "Electric Auxiliary Power Unit" for shuttle upgrade. One of the tasks is Lithium battery testing. Penni Dalton (6910) said that the original plan was to have done this testing by 4Q00 and FY99 funds were obtained and sent to Crane. However, JSC/Boeing did not procure and provide the cells to be tested therefore no testing has yet been initiated. This is a schedule change by JSC/ Boeing. The first cells will not go on test until in April, and the current schedule will be to complete testing by 4Q01. 1Q00 6900 R. Burns
OngoH3.A		On-	Provide power system and hardware expertise to support the development, verification, acceptance, sustaining engineering, and operations of the ISS:	On- going		B. Manners	6900	M/ISS	GREEN	GREEN	GREEN	6000 M. Lester
OngoH3.B		On-	Analyze the ISS power system to determine end-to-end performance in stage and orientation-specific cases to support design analysis and verification analysis cycles; provide analyses of power system performance during ISS operations to validate system and component performance.			J. Hojnicki	6900	M/ISS	GREEN	GREEN	GREEN	6000 M. Lester
OngoH3.C		On-	Analyze and interpret accelerometer data to characterize the microgravity environment of the ISS for the microgravity science principal investigations.	On- going		D. Francisco	6727	Acceleration Measurement Research Projects	GREEN	GREEN	GREEN	Software development is on track to meet operations requirements for a 6A launch. 6000 M. Lester/D. Francisco